

west virginia department of environmental protection

Office of Oil and Gas 601 57th Street SE Charleston, WV 25304 (304) 926-0450 (304) 926-0452 fax Earl Ray Tomblin, Governor Randy C. Huffman, Cabinet Secretary www.dep.wv.gov

November 15, 2013

WELL WORK PERMIT

Re-Work

This permit, API Well Number: 47-5100310, issued to EAGLE NATRIUM LLC, is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to all conditions and provisions outlined in the pages attached hereto. Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas inspector.

Please be advised that form WR-35, Well Operators Report of Well Work is to be submitted to this office within 90 days completion of permitted well work, as should form WR-34 Discharge Monitoring Report within 30 days of discharge of pits, if applicable. Failure to abide by all statutory and regulatory provisions governing all duties and operations hereunder may result in suspension or revocation of this permit and, in addition, may result in civil and/or criminal penalties being imposed upon the operators.

In addition to the applicable requirements of this permit, and the statutes and rules governing oil and gas activity in WV, this permit may contain specific conditions which must be followed. Permit conditions are attached to this cover letter.

Per 35CSR-4-5.2.g this permit will expire in two (2) years from the issue date unless permitted well work is commenced. If there are any questions, please feel free to contact me at (304) 926-0499 ext. 1654.

James Martin

Chief

Operator's Well No: 8 BRINE WELL

Farm Name: AXIALL CORPORATION

API Well Number: 47-5100310 Permit Type: Re-Work

Date Issued: 11/15/2013

Promoting a healthy environment.

PERMIT CONDITIONS

West Virginia Code § 22-6-11 allows the Office of Oil and Gas to place specific conditions upon this permit. Permit conditions have the same effect as law. Failure to adhere to the specified permit conditions may result in enforcement action.

CONDITIONS

- 1. All pits must be lined with a minimum of 20 mil thickness synthetic liner.
- 2. In the event of an accident or explosion causing loss of life or serious personal injury in or about the well or while working on the well, the well operator or its contractor shall give notice, stating the particulars of the accident or explosion, to the oil and gas inspector and the Chief within twenty-four (24) hours.
- 3. Well work activities shall not constitute a hazard to the safety of persons.

WW - 2B (Rev. 8/10)

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS

		<u>V</u>	<u>VELL WORK PE</u>	RMIT APPLIC	CATION 51	3	50
1) Well Operato	or: Eagle	Natrium Ll	LC/Axiall Corporation	39600	Marshall	Franklin	New Martinsvi
				Operator ID	County	District	Quadrangle
) Operator's W	Vell Numb	er:_#8 In	jection Well		3) Elevation:	634.72'	- 400
) Well Type: (a	a) Oil	or Ga	as Brine				CK . 400
(b) If Gas:	Produ	iction / Und	erground Sto	rage		
		Deep	p/ SI	nallow			
i) Proposed Taii) Proposed Toii) Approximateii) Approximate	fresh wa	ter strata		ormation at I	Proposed Tai Proposed Tot	rget Depth: Sal	6812.25' ina
) Approximate	coal sea	m depth	s: 240' to 260'				_
0) Approximat	e void de	pths,(co	al, Karst, other):	N/A			
1) Does land	contain co	nal seam	s tributary to acti	ve mine?	lo		
3) TYPE S	SPECIFIC		ASING AND TUB	ING PROGR	AM INTERVALS	S CEME	ENT
	Size	Grade	Weight per ft	For Drilling	Left in Well	Fill -up (Cu	u. Ft.)
Conductor	16"		52.3	61	61		
Fresh Water	13-3/8"	H-40	48.9	414	414	Nor	ne
Coal							
Intermediate	10 3/4"	H-40	32.75	1534'	1534'		
Production	8 5/8"	J-55	36	6812'	6812'		-0
Tubing					Off	RECEIVE ice of Oil a	nd Gas
Liners					011	OCT 282	
Packers: Kind Size Dep	-				V Envi	/V Departr	ment of

Procedure to Remediate #8 Injection Well

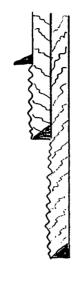
- 1. Pick up 8 5/8" casing scraper w/ bit and clean ID of casing to hole at 5747' and if possible to get past hole scrape to 6200'.
- 2. If necessary Swedge or Mill through restricted area at 5747' then scrape to 6200'.
- 3. Perform bond log to verify top of cement location and verify cement to Oriskany.
- 4. Set drillable bridge plug at approximately 5850' and load hole.
- 5. Try to circulate through the existing hole.
- 6. If necessary shoot an additional 4 squeeze holes at point determined from log. (est. 5790')
- 7. Attempt injection test down 8.625" csg. Pressure not to exceed 800 psi
- 8. TIH with 2.875" work string and 8.625" cement retainer
- 9. Set retainer at approx. 5720'.
- 10. Circulate Flourescent dye to calculate annular volume.
- 11. Pump cement to fill annulus from 5812' to approximately 1535'.
- 12. Displace cement.
- 13. Sting out of retainer and wash up.
- 14. TOOH with work string
- 15. Run bond log to verify cement placement
- 16. Drill out retainer.
- 17. Perform MIT test on casing
- 18. Drill out bridge plug
- 19. TOOH and secure well head

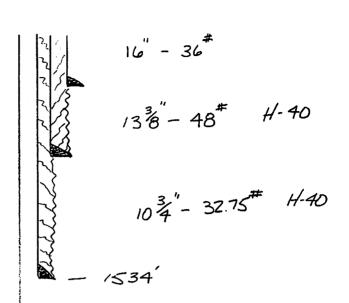
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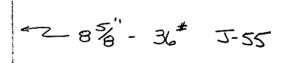
Office of Oil and Gas

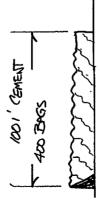
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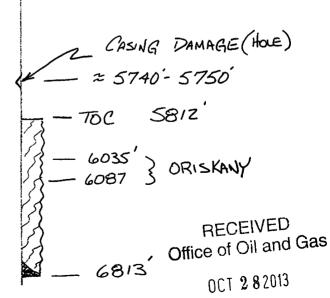
WV Department of Environmental Protection











WV Department of Environmental Protection

WW-2A (Rev. 6-07)	1). Date: 10/24/13
	2.) Operator's Well Number #8 Injection Well
1	State County Permit
1	3.) API Well No.: 47- 051 - 00310
	STATE OF WEST VIRGINIA
DEP	ARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
	NOTICE AND APPLICATION FOR A WELL WORK PERMIT
	vner(s) to be served: 5) (a) Coal Operator
(a) Name	Eagle Natrium LLC/Axiall Corporation Name
Address	P.O. Box 191 Address
	New Martinsville, WV 26155
(b) Name	(b) Coal Owner(s) with Declaration
Address	Name
	Address
Can Malaisa	Mana 1
(c) Name	Name
Address	Address
6) Inspector	(c) Coal Lessee with Declaration
Address	Nome
71441000	Address
Telephone	
, 0,000,000	TO THE PERSONS NAMED ABOVE TAKE NOTICE THAT:
Included is t	he lease or leases or other continuing contract or contracts by which I hold the right to extract oil and gas
OR	
	he information required by Chapter 22, Article 6, Section 8(d) of the Code of West Virginia (see page 2)
	that as required under Chapter 22-6 of the West Virginia Code I have served copies of this notice and
application, a loc	cation plat, and accompanying documents pages 1 through on the above named parties by: Personal Service (Affidavit attached)
2-	Certified Mail (Postmarked postal receipt attached)
-	Publication (Notice of Publication attached)
I have re	ead and understand Chapter 22-6 and 35 CSR 4, and I agree to the terms and conditions of any permit
issued under this	s application.
	under penalty of law that I have personally examined and am familiar with the information submitted on
	form and all attachments, and that based on my inquiry of those individuals immediately responsible for ormation, I believe that the information is true, accurate and complete.
	are that there are significant penalties for submitting false information, including the possibility of fine and

imprisonment OFFICIAL SEAL Well Operator Eagle Natrium LLC/Axiall Corporation NOTARY PUBLIC By: STATE OF WEST VIRGINIA KAREN SAPP Its: Manager Environmental 535 South Third Avenue Address P.O. Box 191 Paden City, West Virginia 26159 My Commission Expires Apr. 10, 2016 New Martinsville, WV 26155

Subscribed and sworn before me this day of

304-455-2200 2013

My Commission Expires 2016 Notary Public

RECEIVED Office of Oil and Gas

Oil and Gas Privacy Notice

The Office of Oil and Gas processes your personal information, such as name, address and phone number, as a part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use of your personal information, please contact DEP's Chief Privacy Officer at Environmental Protection depprivacyofficer@wv.gov

SURFACE OWNER WAIVER

County	Marshall	Operator	Eagle Natrium LLC.	
		Operator well number	#8 Injection Well	
(INSTRUCTIO	NS TO SURFACE OWNERS NAMED ON F	AGE WW2-A	

The well operator named on page WW2A is applying for a permit from the State to do oil or gas well work. (Note: If the surface tract is owned by more than three persons, then these materials were served on you because your name appeared on the Sheriff's tax ticket on the land or because you actually occupy the surface tract. In either case, you may be the only owner who will actually receive these materials.) See Chapter 22 of the West Virginia Code. Well work permits are valid for 24 months. If you do not own any interest in the surface tract, please forward these materials to the true owner immediately if you know who it is. Also, please notify the well operator and the Office of Oil and Gas.

NOTE: YOU ARE NOT REQUIRED TO FILE ANY COMMENT.
WHERE TO FILE COMMENTS AND OBTAIN ADDITIONAL INFORMATION:

Chief, Office of Oil and Gas Department of Environmental Protection 601 57th St. SE Charleston, WV 25304 (304) 926-0450

Time Limits and methods for filing comments. The law requires these materials to be served on or before the date the operator files his Application. You have FIFTEEN (15) DAYS after the filing date to file your comments. Comments must be filed in person or received in the mail by the Chief's office by the time stated above. You may call the Chief's office to be sure of the date. Check with your postmaster to ensure a dequate delivery time or to arrange special expedited handling. If you have been contacted by the well operator and you have signed a "voluntary statement of no objection" to the planned work described in these materials, then the permit may be issued at any time.

<u>Comments must be in writing.</u> Your comments must include your name, address and telephone number, the well operator's name and well number and the approximate location of the proposed well site including district and county from the application. You may add other documents, such as sketches, maps or photographs to support your comments.

The Chief has the power to deny or condition a well work permit based on comments on the following grounds:

- 1) The proposed well work will constitute a hazard to the safety of persons.
- 2) The soil erosion and sediment control plan is not adequate or effective;
- 3) Damage would occur to publicly owned lands or resources;
- 4) The proposed well work fails to protect fresh water sources or supplies;
- 5) The applicant has committed a substantial violation of a previous permit or a substantial violation of one or more of the rules promulgated under Chapter 22, and has failed to abate or seek review of the violation...".

If you want a copy of the permit as it is issued or a copy of the order denying the permit, you should request a copy from the Chief.

<u>List of Water Testing Laboratories.</u> The Office maintains a list of water testing laboratories which you can hire to test your water to establish water quality prior to and after drilling. Contact the Chief to obtain a copy.

VOLUNTARY STATEMENT OF NO OBJECTION

I hereby state that I have read the instructions to surface owners and that I have received copies of a Notice and Application for a Well Work Permit on Form WW2-A, and attachments consisting of pages 1 through ____ including a work order on F orm WW2-B, a s urvey plat, and a s oil and erosion plan, all for proposed well work on my surface land as described therein.

I further state that I have no objection to the planned work described in these materials, and I have no objection to a permit being issued on those materials.

FOR EXECUTION BY A NATURA	AL PERSON	FC	OR EXECUTION BY A CORPOR	ATION ETCS
	Date	Company Name	Eagle Natrium LLC/Axiall Corporation	282013
Signature		Ву	Ed McLaughlin	- ot
	20	Its	Brine Field Engineer WV De	partm@ate protection
Print Name			Ed Marine	ental 10/25/13
			Signature	Date

WW-2A Coal Waiver

NA

COAL OPERATOR, OWNER, OR LESSEE WAIVER

County Operator	Operator's Well Nun	mber #8 Injection	Well
INSTRUCTIONS TO C	OAL OPERATOR, OV	VNER, OR LESSEE	
To the coal operator, owner, or less any objection you wish to make or are rec with the Chief of the Office of Oil and Ga by the Office. Mail objections to:	quired to make by WV	Code 22-6-15, 16 or	17, must be filed
Chief, Office of Oil and Gas Department of Environmental Protection 601 57 th St. SE Charleston, WV 25304 (304) 926-0499 extension 1654			
	WAIVER		
The undersigned coal operatorlocation has examined this proposed well location, the well location has been added work proposed to be done at this location requirements of the West Virginia Code a	location. If a mine maded to the mine map. The provided, the well op	ap exists which cover ne undersigned has n erator has complied v	s the area of well o objection to the
FOR EXECUTION BY A NATURAL PERSON	FOR	EXECUTION BY A COR	PORATION, ETC.
Date Signature	Company Name By Its		Date
	its		Date
		Signature	Date

Office of Oil and Gas

OCT 282013

WV Department of
Environmental Protection

Operator's Well Number #8 Injection Well

INFORMATION SUPPLIED UNDER WEST VIRGINIA CODE Chapter 22, Article 6, Section 8(d) IN LIEU OF FILING LEASE(S) AND OTHER CONTINUING CONTRACT(S)

Under the oath required to make the verification on page 1 of this Notice and Application, I depose and say that I am the person who signed the Notice and Application for the Applicant, and that -

- (1) the tract of land is the same tract described in this Application, partly or wholly depicted in the accompanying plat, and described in the Construction and Reclamation Plan;
- (2) the parties and recordation data (if recorded) for lease(s) or other continuing contract(s) by which the Applicant claims the right to extract, produce or market the oil or gas are as follows:

Grantor, Lessor, etc.

Grantee, Lessee, etc.

Royalty

Book/Page

351/265

Acknowledgement of Possible Permitting/Approval In Addition to the Office of Oil and Gas

The permit applicant for the proposed well work addressed in this application hereby a cknowledges the possibility of the need for permits and/or approvals from local, state, or federal entities in addition to the DEP, Office of Oil and Gas, including but not limited to the following:

- WV Division of Water and Waste Management
- WV Division of Natural Resources
- WV Division of Highways
- U.S. Army Corps of Engineers
- . U.S. Fish and Wildlife Service
- County Floodplain Coordinator

The applicant further acknowledges that any Office of Oil and Gas permit in no way overrides, replaces, or nullifies the need for other permits/approvals that may be necessary and further affirms that all needed as permits/approvals should be ac quired from the appr opriate aut hority before the affected activity is initiated.

> Well Operator: By: Its:

Eagle Natrium LLC

Manager, Environmental Control

WW-2B1	
(5-12)	

Well No. #8 Injection Well	
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West Virginia Department of Environmental Protection Office of Oil and Gas

NOTICE TO SURFACE OWNERS

The well operator named below is preparing to file for a permit from the state to drill a new well. Before a well work permit can be filed with the Chief of the Office of Oil and Gas, the well operator is required to have given notice of the right to request water well or spring analytical testing. This notice shall be given to the owners or occupants of land which have a water well or spring being utilized for human consumption, domestic animals, or other general use and which is located within 1000 feet of the proposed well site.

With this form, the operator is giving you notice of your right to request analytical testing. The operator is required to sample and analyze the water wells or springs of all owners or occupants who request it. Therefore, if you wish to have your water well or spring tested, contact the operator named below.

All sampling shall be completed prior to drilling. Within thirty (30) days of the receipt of such sample analyses the operator shall submit the results to the Chief of the Office of Oil and Gas and to the owners or occupants who may have requested them.

Be advised, you have the right to sample and analyze any water supply at your own expense.

Listed below is the laboratory chosen by operator to perform analysis, and contactor chosen to collect sample.

Certified Labora Sampling Contr	•
Well Operator	Eagle Natrium LLC
Address	P.O. Box 191
	New Martinsville, WV 26155
Telephone	(304)455-2200

FOR OPERATOR'S USE ONLY: Below, or on an attached page, list those persons which were given this notice. Place an asterisk beside the one(s) that contacted you and requested sampling and analyses. If there were no requests made, indicate by underling which one you have selected to sample and analyze. If there are no water wells or springs within 1000 feet of the proposed site, the Chief may require the operator to test wells up to 2000 feet from the proposed site.

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Office of Oil and Gas

OCT 282013

WV Department of Environmental Protection WW-9 (5/13)

	Page of	
API Number 47 - 051	-00310	
Operator's We	II No. #8 Injection Well	

STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION OFFICE OF OIL AND GAS

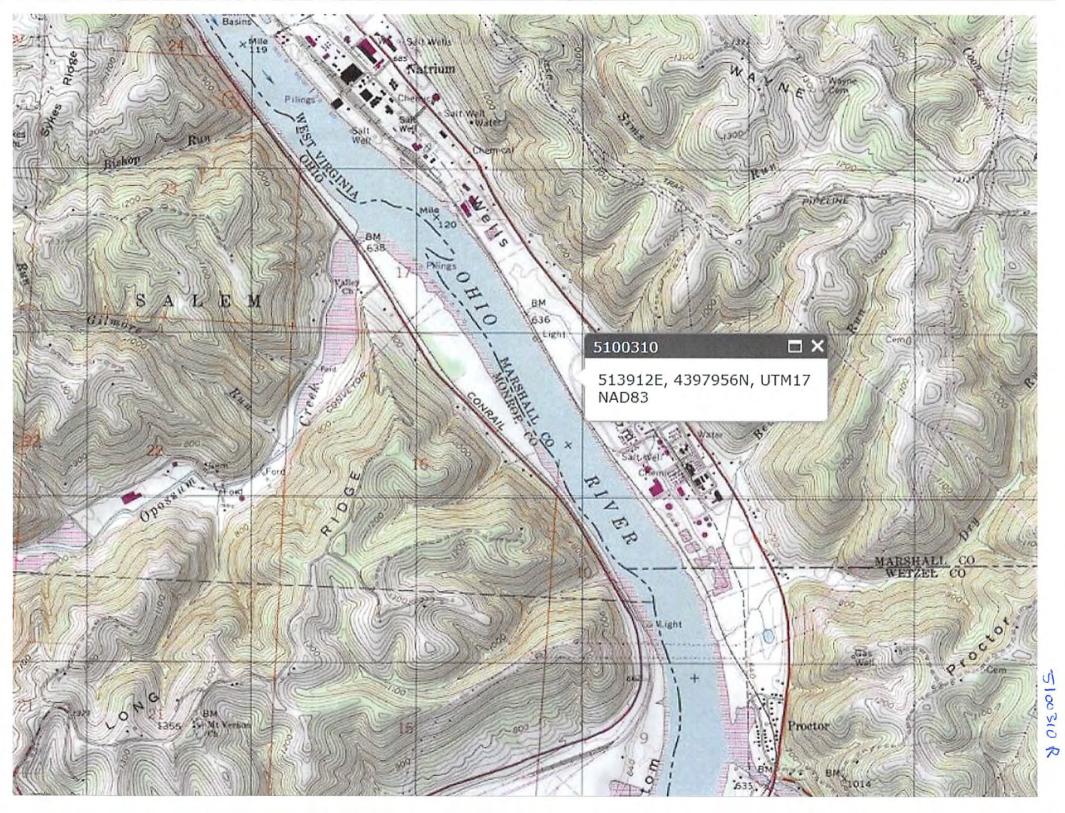
FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

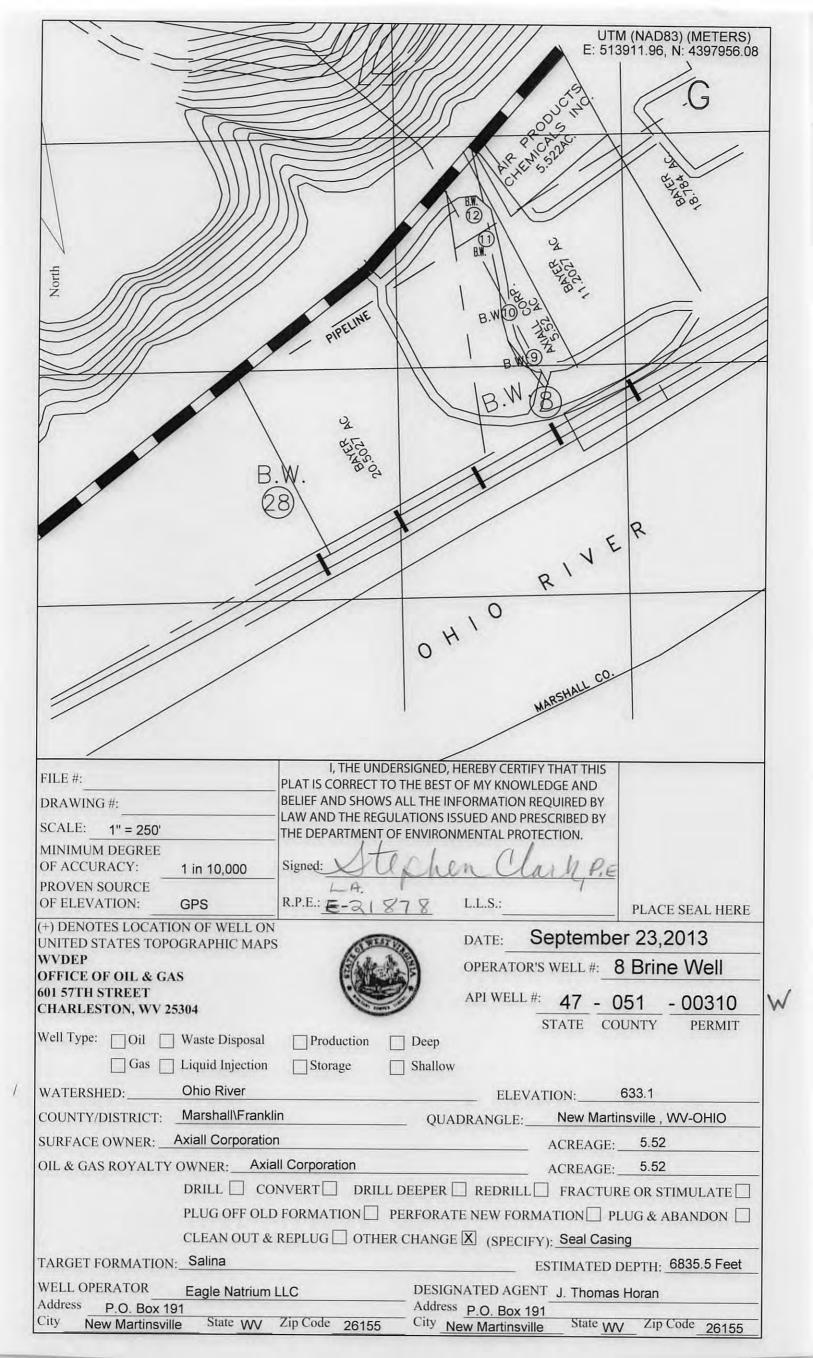
Operator Name Eagle Natrium LLC		OP Code _ 39600	
Watershed (HUC 10) Ohio River		Quadrangle New Martinsville	
Elevation 634.72'	County_Marshall	District_ Frank	din
Do you anticipate using more than 5,00	00 bbls of water to complete the	he proposed well work? Yes	No ×
Will a pit be used for drill cuttings?			
		If so, what ml.?	
Proposed Disposal Method Fo			
Reuse (at A Off Site Disp	d Injection (UIC Permit Nun .PI Number)
Will closed loop system be used? No			
Drilling medium anticipated for this we	ell? Air, freshwater, oil based	I, etc. Brine	
-If oil based, what type? Synt	hetic, petroleum, etc		
Additives to be used in drilling medium			
Drill cuttings disposal method? Leave			
		? (cement, lime, sawdust)	
-Landfill or offsite name/perm			
on August 1, 2005, by the Office of Oil provisions of the permit are enforceable law or regulation can lead to enforcement	I and Gas of the West Virginia le by law. Violations of any ent action. w that I have personally example thereto and that, based on hat the information is true, a	a Department of Environmental term or condition of the general mined and am familiar with the my inquiry of those individual accurate, and complete. I am	al permit and/or other applicable e information submitted on this als immediately responsible for
Company Official Signature	Istora		
Company Official (Typed Name) J. Tr			
Company Official Title Manager, Envi	ronmental Control		RECEIVED Gas
	A 20	. (C.)	Office of Oil and Gas
Subscribed and sworn before me this_	25 day of Octo	Notary Pul	KAREN SAPP
My commission expires	April 10, 20	16	535 South Third Ave Paden City; West Virgini My Commission Expires Ar

Form WW-9

Operator's Well No. #8 Injection Well

Proposed Revegetation 1 r	eatment: Acres Disturbe	N/A	Prevegetation	n pH	
		correct to pH			
Fertilizer (10-20-	20 or equivalent)	lbs/acre (500 lb	s minimum)		
Mulch		Tons/acre			
		Seed Mixtures			
Seed Type	Area I Ibs/acre		Seed Type	Area II Ib	os/acre
Attach: Drawing(s) of road, location Photocopied section of inv					
Drawing(s) of road, location of inv	olved 7.5' topographic s	heet.			///
Drawing(s) of road, location Photocopied section of inverting the sect	olved 7.5' topographic s	heet.			
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Drawing(s) of road, location Photocopied section of inverting the sect	volved 7.5' topographic s	heet.			







Axiall Corporation Eagle Natrium LLC PO Box 191 New Martinsville, WV 26155

J. Thomas Horan Manager Environmental Telephone: (304) 455-2200 ext. 3310 Fax: (304) 455-2422 Tom.Horan@axiall.com

October 25, 2013

Certified Mail Return Receipt Requested

James Martin, Chief WV Department of Environmental Protection Office of Oil & Gas 601 57th Street Charleston, WV 25304

Attention: Mr. James Peterson:

Subject: Well Work Permit Application for #8 Injection Well,

API Well Number 47-051-0310, UIC Permit No. UIC3S05101

Please find attached, the required completed forms and associated maps for a well work permit for #8 Injection Well. Also, attached is a check in the amount of \$800.00 for the required permit application fee.

If you should have any questions, please call Mr. Ed McLaughlin at (304) 266-8647.

Sincerely,

J. Thomas Horan

Manager Environmental

Attachments:

Office of Oil and Gas

UCT 282013

WV Department of Environmental Profection